

SEQUENCE LISTING

<110> SmithKline Beecham Biologicals S.A.

<120> Novel compounds

<130> BM45348

<160> 16

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 804

<212> DNA

<213> *Neisseria meningitidis*

<400> 1

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gaagcccagg acgaattgaa cagcagcaat tatacgcggg ctgtcaagtt atacgaaatc      180
ttggaatcgc gcttccccac cagccgccat gcccggaat cccaactgga taccgcatac      240
gcctattata aagacgatga aaaagacaag gctctggcgg caatcgaacg cttccgccgc      300
ctccatccgc agcatccgaa tatggattac gcgctgtatc tgcgcggcctt ggtgctgttc      360
aacgaagacc agtccttctt gaacaaactg gcctcgcaag actggtccga ccgcgacccg      420
aaagccaacc gcgaagtaac ccaggcgttt gcggaactcg tccaacgctt cccaacagc      480
aaatacgccg ccgatgcgac cgcacgcatg gtcaaactgg tcgatgcact gggcggcaat      540
gaaatgtcgg tggcgcgcta ctacatgaaa cgcgggcgcat atatcgccgc cgccaaccgc      600
gccccaaaaa ttatcggcag ctacaaaaat acacgctatg tcgaagaatc gctcgccatc      660
ttggaacttg cctacaaaaa actcggcaaa ccacagcttg ccgccgatac gcgccgcgtg      720
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<210> 2

<211> 267

<212> PRT

<213> *Neisseria meningitidis*

<400> 2

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 1             5             10             15
Cys Ala Thr Gln Gly Thr Val Asp Lys Asp Ala Gln Ile Thr Gln Asp
          20             25             30
Trp Ser Val Glu Lys Leu Tyr Ala Glu Ala Gln Asp Glu Leu Asn Ser

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35 40 45
 Ser Asn Tyr Thr Arg Ala Val Lys Leu Tyr Glu Ile Leu Glu Ser Arg
 50 55 60
 Phe Pro Thr Ser Arg His Ala Arg Gln Ser Gln Leu Asp Thr Ala Tyr
 65 70 75 80
 Ala Tyr Tyr Lys Asp Asp Glu Lys Asp Lys Ala Leu Ala Ala Ile Glu
 85 90 95
 Arg Phe Arg Arg Leu His Pro Gln His Pro Asn Met Asp Tyr Ala Leu
 100 105 110
 Tyr Leu Arg Gly Leu Val Leu Phe Asn Glu Asp Gln Ser Phe Leu Asn
 115 120 125
 Lys Leu Ala Ser Gln Asp Trp Ser Asp Arg Asp Pro Lys Ala Asn Arg
 130 135 140
 Glu Val Thr Gln Ala Phe Ala Glu Leu Val Gln Arg Phe Pro Asn Ser
 145 150 155 160
 Lys Tyr Ala Ala Asp Ala Thr Ala Arg Met Val Lys Leu Val Asp Ala
 165 170 175
 Leu Gly Gly Asn Glu Met Ser Val Ala Arg Tyr Tyr Met Lys Arg Gly
 180 185 190
 Ala Tyr Ile Ala Ala Ala Asn Arg Ala Gln Lys Ile Ile Gly Ser Tyr
 195 200 205
 Gln Asn Thr Arg Tyr Val Glu Glu Ser Leu Ala Ile Leu Glu Leu Ala
 210 215 220
 Tyr Gln Lys Leu Gly Lys Pro Gln Leu Ala Ala Asp Thr Arg Arg Val
 225 230 235 240
 Leu Glu Thr Asn Phe Pro Lys Ser Pro Phe Leu Thr His Ala Trp Gln
 245 250 255
 Pro Asp Asp Met Pro Trp Trp Arg Tyr Trp His
 260 265

<210> 3

<211> 1404

<212> DNA

<213> *Neisseria meningitidis*

<400> 3

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 gataccgccg acagcggcat ccgtgcggtc gatttaggtt ggcatgacta ttttgccgac 180
 ccgcgcctgc aaaagctgat cgacatcgca ctcgagcgca ataccagttt gcgtaccgcc 240
 gtattgaaca gcgaaatcta ccgcaaacia tacatgattg agcgcaacia cctcctgccc 300
 acgcttgccg ccaatgcgaa cggctcgcgc caaggcagct tgagcggcgg caatgtcagc 360
 agcagctaca atgtcggact ggggtcggca tcttacgaac tcgacctgtt cggacgcgtc 420
 cgcagcagca gcgaagcagc actgcaaggc tattttgcaa gtgtcgccaa ccgcgatgcg 480
 gcacatttga gcctgattgc caccgttgcc aaagcctatt tcaacgaacg ttatgccgaa 540
 gaagcgatgt ctttggcgca gcgtgttttg aaaacgcgcg aggaaacctt caagctgtcc 600
 gaattacgtt acaaggcagg cgtgatttcc gccgtcgcgc tacgtcagca ggaagccctg 660

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atcgaatctg ccaaagccga ttatgcccat gccgcgcgca gccgcgaaca ggcgcgcaat   720
gccttgga ccttgattaa ccaaccgata ccgaagacc tgcctgccgg ttgcccgtg   780
gacaagcagt tttttgtga aaaactgccg gccggtttga gttccgaagt attgctcgac   840
cgtcccgaata tccgtgctgc cgaacacgcg ctcaaacagg caaacgccaa tatcggtgcg   900
gcacgcgcgcg cttttttccc atccatccgc ctgaccggaa ccgtcgggtac gggttctgcc   960
gaattgggtg ggttggttcaa aagcggcacg gccgttttgt cgttcgcgcc gtctattacc  1020
ctgccgattt ttacctgggg tacgaacaaa gccaaccttg atgtagccaa gctgcgccaa  1080
caggcacaaa tcgttgcccta tgaagccgcc gtccaatccg catttcaaga cgtggcaaac  1140
gcattggcgg cgcgcgagca gctggataaa gcctatgacg ctttaagcaa acaaagccgc  1200
gcctctaaag aggcgttgcg cttggtcggc ctgcgttaca agcacggcgt atccggcgcg  1260
ctcgacttgc tcgatgcgga acgcagcagc tatgcggcgg aggtgcggc tttgtcggca  1320
caactgaccc gcgccgaaaa ctttgccgat ttgtacaagg cactcggcgg cggattgaaa  1380
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<210> 4

<211> 467

<212> PRT

<213> *Neisseria meningitidis*

<400> 4

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Ala Leu Ser Ala Cys Thr Met Ile Pro Gln Tyr Glu Gln Pro Lys Val
 20              25              30
Glu Val Ala Glu Thr Phe Lys Asn Asp Thr Ala Asp Ser Gly Ile Arg
 35              40              45
Ala Val Asp Leu Gly Trp His Asp Tyr Phe Ala Asp Pro Arg Leu Gln
 50              55              60
Lys Leu Ile Asp Ile Ala Leu Glu Arg Asn Thr Ser Leu Arg Thr Ala
 65              70              75              80
Val Leu Asn Ser Glu Ile Tyr Arg Lys Gln Tyr Met Ile Glu Arg Asn
 85              90              95
Asn Leu Leu Pro Thr Leu Ala Ala Asn Ala Asn Gly Ser Arg Gln Gly
100              105              110
Ser Leu Ser Gly Gly Asn Val Ser Ser Ser Tyr Asn Val Gly Leu Gly
115              120              125
Ala Ala Ser Tyr Glu Leu Asp Leu Phe Gly Arg Val Arg Ser Ser Ser
130              135              140
Glu Ala Ala Leu Gln Gly Tyr Phe Ala Ser Val Ala Asn Arg Asp Ala
145              150              155              160
Ala His Leu Ser Leu Ile Ala Thr Val Ala Lys Ala Tyr Phe Asn Glu
165              170              175
Arg Tyr Ala Glu Glu Ala Met Ser Leu Ala Gln Arg Val Leu Lys Thr
180              185              190
Arg Glu Glu Thr Tyr Lys Leu Ser Glu Leu Arg Tyr Lys Ala Gly Val
195              200              205
Ile Ser Ala Val Ala Leu Arg Gln Gln Glu Ala Leu Ile Glu Ser Ala

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[illegible]

<210> 5
<211> 420
<212> DNA
<213> *Neisseria meningitidis*

<400> 5						
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ccgcgcacaa	ataacccgct	ttccgatacg	gtagctgtcg	gaatgattaa	aacatccggt	180
tcgccttcgg	catcaaatat	gattgaaatg	ctcggcgcg	acaatatcaa	cgtcggcggtg	240
gtgggaagca	gccaaatgct	taataaggcg	accgcacttt	attccttaaa	ccatgcaaag	300
aaagtgcgaa	ataatgtcag	tgttttatatg	atgggcgcaca	gcgaaagtga	caaggccgat	360
ttggaaaacg	cggcaaattgc	caaaaatatc	aaattgcatt	atttcttttaa	ccaaaaataa	420

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<210> 6
<211> 139
<212> PRT
<213> Neisseria meningitidis
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<400> 6

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Ala	Thr	Gly	Val	Asn	Val	Gly	Arg	Leu	Met	Val	Glu	Met	Pro	Gln	Gly
		20						25					30		
Glu	Arg	Ser	Val	Val	Val	Gln	Val	Pro	Ala	Thr	Asn	Asn	Pro	Leu	Ser
		35					40					45			
Asp	Thr	Val	Ala	Val	Gly	Met	Ile	Lys	Thr	Ser	Gly	Ser	Pro	Ser	Ala
	50					55					60				
Ser	Asn	Met	Ile	Glu	Met	Leu	Gly	Ala	Asp	Asn	Ile	Asn	Val	Gly	Val
65					70					75					80
Val	Gly	Ser	Ser	Gln	Met	Leu	Asn	Lys	Ala	Thr	Ala	Leu	Tyr	Ser	Leu
				85					90					95	
Asn	His	Ala	Lys	Lys	Val	Gly	Asn	Asn	Val	Ser	Val	Tyr	Met	Met	Gly
		100						105					110		
Asp	Ser	Glu	Ser	Asp	Lys	Ala	Asp	Leu	Glu	Asn	Ala	Ala	Asn	Ala	Lys
		115					120					125			
Asn	Ile	Lys	Leu	His	Tyr	Phe	Phe	Asn	Gln	Lys					
130							135								

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<210> 7
<211> 516
<212> DNA
<213> Neisseria meningitidis
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<400> 7

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aaaccctatt	ccgtaacgct	cgacaacaat	cgcggtacat	tcccgaccta	tgacgaattg	180
gacttgatgc	gtcccgggtct	gaccaaagac	gacatctaca	aaatcctggg	tcgtccgcat	240
tacgacgaag	gtatgtacgg	cgtgcgcgaa	tgggattatc	tgttccactt	ccacacccccg	300
ggcgtaggca	tcgaccctga	aaacacttcc	ggcgtagaag	gcattaccac	ctgtcaatac	360
aaaattatth	tcgataaaga	caaatttgcc	cgcagcttct	actggaaccc	cgtcttcccg	420
aaagatgccg	cctgtccgcc	gcccgacccc	aaagccgagc	cgcaagtcac	catccgcgaa	480
atcgtgcccg	ccaaacccaa	acgcatccgc	caataa			516

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<210> 8
<211> 171
<212> PRT
<213> Neisseria meningitidis
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<400> 8

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Met Lys Ile Lys Gln Ile Val Lys Pro Gly Leu Ala Val Leu Ala Ala
 1             5             10             15
Gly Val Leu Ser Ala Cys Ala Thr Lys Ser Asn Val Lys Ala Asp Gly
      20             25             30
Thr Thr Asp Asn Pro Val Phe Pro Lys Pro Tyr Ser Val Thr Leu Asp
      35             40             45
Asn Asn Arg Gly Thr Phe Pro Thr Tyr Asp Glu Leu Asp Leu Met Arg
      50             55             60
Pro Gly Leu Thr Lys Asp Asp Ile Tyr Lys Ile Leu Gly Arg Pro His
65             70             75             80
Tyr Asp Glu Gly Met Tyr Gly Val Arg Glu Trp Asp Tyr Leu Phe His
      85             90             95
Phe His Thr Pro Gly Val Gly Ile Asp Pro Glu Asn Thr Ser Gly Val
      100             105             110
Glu Gly Ile Thr Thr Cys Gln Tyr Lys Ile Ile Phe Asp Lys Asp Lys
      115             120             125
Phe Ala Arg Ser Phe Tyr Trp Asn Pro Val Phe Pro Lys Asp Ala Ala
      130             135             140
Cys Pro Pro Pro Ala Pro Lys Ala Glu Pro Gln Val Ile Ile Arg Glu
145             150             155             160
Ile Val Pro Ala Lys Pro Lys Arg Ile Arg Gln
      165             170

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<210> 9

<211> 816

<212> DNA

<213> *Neisseria meningitidis*

<400> 9

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caggctaaag aacaaaccag tttcaacaat cccgagccaa tgacaggatt tgaacatacg      180
gttacatttg attttcaggg caccaaaatg gttatcccct atggctatct tgcacggtat      240
acgcaagaca atgccacaaa atggctttcc gacacgcccg ggcaggatgc ttactccatt      300
aatttgatag agattagcgt ctattacaaa aaaaccgacc aaggctgggt tcttgagcca      360
tacaaccagc aaaacaaagc acactttatc caattttctac gcgacggttt ggatagcgtg      420
gacgatattg ttatccgaaa agatgcgtgt agtttaagta cgactatggg agaaagattg      480
cttacttacg gggttaaaaa aatgccatct gcctatcctg aatacgaggc ttatgaagat      540
aaaagacata ttctgaaaaa tccatatttt catgaatttt actatattaa aaaaggagaa      600
aatccggcga ttattactca tcggaataat cgaataaacc aaactgaaga agatagttat      660
agcactagcg taggttcctg tattaacggt ttcacggtac agtattaccc gttttattcg      720
gaaaagcagc agctcacaca gcaggagttg gtaggttatc accaacaagt agagcaattg      780
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<210> 10

<211> 271

WO 00/42191

PCT/EP00/00135

<212> PRT

<213> *Neisseria meningitidis*

<400> 10

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Met Arg Pro Tyr Ala Thr Thr Ile Tyr Gln Leu Phe Ile Leu Phe Ile
 1           5           10           15
Gly Ser Val Phe Thr Met Thr Ser Cys Glu Pro Val Asn Glu Lys Thr
          20           25           30
Asp Gln Lys Ala Val Ser Ala Gln Gln Ala Lys Glu Gln Thr Ser Phe
          35           40           45
Asn Asn Pro Glu Pro Met Thr Gly Phe Glu His Thr Val Thr Phe Asp
          50           55           60
Phe Gln Gly Thr Lys Met Val Ile Pro Tyr Gly Tyr Leu Ala Arg Tyr
65           70           75           80
Thr Gln Asp Asn Ala Thr Lys Trp Leu Ser Asp Thr Pro Gly Gln Asp
          85           90           95
Ala Tyr Ser Ile Asn Leu Ile Glu Ile Ser Val Tyr Tyr Lys Lys Thr
          100          105          110
Asp Gln Gly Trp Val Leu Glu Pro Tyr Asn Gln Gln Asn Lys Ala His
          115          120          125
Phe Ile Gln Phe Leu Arg Asp Gly Leu Asp Ser Val Asp Asp Ile Val
          130          135          140
Ile Arg Lys Asp Ala Cys Ser Leu Ser Thr Thr Met Gly Glu Arg Leu
145          150          155          160
Leu Thr Tyr Gly Val Lys Lys Met Pro Ser Ala Tyr Pro Glu Tyr Glu
          165          170          175
Ala Tyr Glu Asp Lys Arg His Ile Pro Glu Asn Pro Tyr Phe His Glu
          180          185          190
Phe Tyr Tyr Ile Lys Lys Gly Glu Asn Pro Ala Ile Ile Thr His Arg
          195          200          205
Asn Asn Arg Ile Asn Gln Thr Glu Glu Asp Ser Tyr Ser Thr Ser Val
          210          215          220
Gly Ser Cys Ile Asn Gly Phe Thr Val Gln Tyr Tyr Pro Phe Ile Arg
225          230          235          240
Glu Lys Gln Gln Leu Thr Gln Gln Glu Leu Val Gly Tyr His Gln Gln
          245          250          255
Val Glu Gln Leu Val Gln Ser Phe Val Asn Asn Ser Asn Lys Lys
          260          265          270

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<210> 11

<211> 717

<212> DNA

<213> *Neisseria meningitidis*

<400> 11

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cctgtttccc gcaatattca ggatatgcgg cccgaaccgc aggcagaggc aggtagtctg 120

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gacgctattc cctatcccggt tccactctg caagaccggt tggattatct ggaaggcaca      180
ctcgtccgcc tgtcgaacga agtggaaacc ttaaaccgga aagtcaaagc actggagcat      240
gcgaaaacac acccttccgg tagggcatac gtccaaaaaac tcgacgaccg caagttgaaa      300
gagcattacc tcaataccga aggcggcagc gcatccgcac ataccgtcga aaccgcacaa      360
aacctctaca atcaggcact caaacactat aaaagcggca ggttttctgc cgcagccgcc      420
ctgttgaaag gcgcggacgg aggcgacggc ggcagcatcg cgcaacgcag tatgtacctg      480
ttgctgcaaa gcagggcgcg tatgggcaac tgcgaatccg tcatcgaaat cggagggcgt      540
tacgccaaacc gtttcaaaga cagcccaacc gcgccgaag ccatgttcaa aatcggcgaa      600
tgccaataca gggtgcagca gaaagacatt gcaagggcaa cttggcgag cctgatacag      660
gcttaccoga gcagcccgcc ggcaaaacgc gccgcgcgag ccgtacgcaa acgatag      717

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<210> 12

<211> 238

<212> PRT

<213> *Neisseria meningitidis*

<400> 12

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Met Lys Thr Lys Leu Pro Leu Phe Ile Ile Trp Leu Ser Val Ser Ala
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      20              25              30
Pro Gln Ala Glu Ala Gly Ser Ser Asp Ala Ile Pro Tyr Pro Val Pro
      35              40              45
Thr Leu Gln Asp Arg Leu Asp Tyr Leu Glu Gly Thr Leu Val Arg Leu
      50              55              60
Ser Asn Glu Val Glu Thr Leu Asn Gly Lys Val Lys Ala Leu Glu His
      65              70              75              80
Ala Lys Thr His Pro Ser Gly Arg Ala Tyr Val Gln Lys Leu Asp Asp
      85              90              95
Arg Lys Leu Lys Glu His Tyr Leu Asn Thr Glu Gly Gly Ser Ala Ser
      100             105             110
Ala His Thr Val Glu Thr Ala Gln Asn Leu Tyr Asn Gln Ala Leu Lys
      115             120             125
His Tyr Lys Ser Gly Arg Phe Ser Ala Ala Ala Ala Leu Leu Lys Gly
      130             135             140
Ala Asp Gly Gly Asp Gly Gly Ser Ile Ala Gln Arg Ser Met Tyr Leu
      145             150             155             160
Leu Leu Gln Ser Arg Ala Arg Met Gly Asn Cys Glu Ser Val Ile Glu
      165             170             175
Ile Gly Gly Arg Tyr Ala Asn Arg Phe Lys Asp Ser Pro Thr Ala Pro
      180             185             190
Glu Ala Met Phe Lys Ile Gly Glu Cys Gln Tyr Arg Leu Gln Gln Lys
      195             200             205
Asp Ile Ala Arg Ala Thr Trp Arg Ser Leu Ile Gln Ala Tyr Pro Ser
      210             215             220
Ser Pro Ala Ala Lys Arg Ala Ala Ala Ala Val Arg Lys Arg
      225             230             235

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<210> 13
 <211> 1176
 <212> DNA
 <213> *Neisseria meningitidis*

<400> 13
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 caacaatctg aagttcaaat tcctgaagtg gagctgattg atgtgaatca tacggttgct 180
 cagttattat ataaggctca gataaatcag tcattcactc agtttggcga tggttatgct 240
 tcggctggta cgctaaatat tggatgatga ttggatatta tgatttggga agcgccgccc 300
 gcagtattgt ttggtggtgg cctttcttcg atgggctcgg gtagtgcgca tcaaactaag 360
 ttgccagagc agttggtcac ggcacgtggt acggtttctg tgccgtttgt tggcgatatt 420
 tcggtggtcg gtaaaacgcc tggtcagggt caggaaatta ttaaaggccg cctgaaaaaa 480
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 gtgattcgtg ctgggaatag tgtgcgtatg ccgctgacgg cagccggtga gcgtgtgttg 600
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 acacgtggca atgtagtacg aactgttgcc ttggaagatt tagttgcaaa tccgcgacaa 720
 aatattttgc tgcgtcgcgg tgatgtggtt accatgatta ccaatcccta tacctttacg 780
 tctatgggtg cggtggggag aacacaagaa atcgggtttt cagccagagg cttatcgctt 840
 tctgaagcca ttggccgtat gggcggtttg caagatcgcc gttctgatgc gcgtggtgtg 900
 tttgtgttcc gctatacgcc attggtggaa ttgccggcag aacgtcagga taaatggatt 960
 gctcaagggt atggcagtga ggcagagatt ccaacggtat atcgtgtgaa tatggctgat 1020
 gcgcattcgc tattttctat gcagcgcttt cctgtgaaga ataaagatgt attgtatgtg 1080
 tcgaatgcgc cggttggtga agtgcagaaa ttcttgctgt ttgtgttctc gccggttacc 1140
 agtggcgcgca acagtattaa taatttaact aattaa 1176

<210> 14
 <211> 391
 <212> PRT
 <213> *Neisseria meningitidis*

<400> 14
 Met Phe Lys Val Lys Phe Tyr Ile Arg His Ala Val Leu Leu Leu Cys
 1 5 10 15
 Gly Ser Leu Ile Val Gly Cys Ser Ala Ile Pro Ser Ser Gly Pro Ser
 20 25 30
 Ala Lys Lys Ile Val Ser Leu Gly Gln Gln Ser Glu Val Gln Ile Pro
 35 40 45
 Glu Val Glu Leu Ile Asp Val Asn His Thr Val Ala Gln Leu Leu Tyr
 50 55 60
 Lys Ala Gln Ile Asn Gln Ser Phe Thr Gln Phe Gly Asp Gly Tyr Ala
 65 70 75 80
 Ser Ala Gly Thr Leu Asn Ile Gly Asp Val Leu Asp Ile Met Ile Trp
 85 90 95
 Glu Ala Pro Pro Ala Val Leu Phe Gly Gly Gly Leu Ser Ser Met Gly

100	105	110
Ser Gly Ser Ala His Gln Thr Lys Leu Pro Glu Gln Leu Val Thr Ala		
115	120	125
Arg Gly Thr Val Ser Val Pro Phe Val Gly Asp Ile Ser Val Val Gly		
130	135	140
Lys Thr Pro Gly Gln Val Gln Glu Ile Ile Lys Gly Arg Leu Lys Lys		
145	150	155
Met Ala Asn Gln Pro Gln Val Met Val Arg Leu Val Gln Asn Asn Ala		
165	170	175
Ala Asn Val Ser Val Ile Arg Ala Gly Asn Ser Val Arg Met Pro Leu		
180	185	190
Thr Ala Ala Gly Glu Arg Val Leu Asp Ala Val Ala Ala Val Gly Gly		
195	200	205
Ser Thr Ala Asn Val Gln Asp Thr Asn Val Gln Leu Thr Arg Gly Asn		
210	215	220
Val Val Arg Thr Val Ala Leu Glu Asp Leu Val Ala Asn Pro Arg Gln		
225	230	235
Asn Ile Leu Leu Arg Arg Gly Asp Val Val Thr Met Ile Thr Asn Pro		
245	250	255
Tyr Thr Phe Thr Ser Met Gly Ala Val Gly Arg Thr Gln Glu Ile Gly		
260	265	270
Phe Ser Ala Arg Gly Leu Ser Leu Ser Glu Ala Ile Gly Arg Met Gly		
275	280	285
Gly Leu Gln Asp Arg Arg Ser Asp Ala Arg Gly Val Phe Val Phe Arg		
290	295	300
Tyr Thr Pro Leu Val Glu Leu Pro Ala Glu Arg Gln Asp Lys Trp Ile		
305	310	315
Ala Gln Gly Tyr Gly Ser Glu Ala Glu Ile Pro Thr Val Tyr Arg Val		
325	330	335
Asn Met Ala Asp Ala His Ser Leu Phe Ser Met Gln Arg Phe Pro Val		
340	345	350
Lys Asn Lys Asp Val Leu Tyr Val Ser Asn Ala Pro Leu Ala Glu Val		
355	360	365
Gln Lys Phe Leu Ser Phe Val Phe Ser Pro Val Thr Ser Gly Ala Asn		
370	375	380
Ser Ile Asn Asn Leu Thr Asn		
385	390	

<210> 15

<211> 807

<212> DNA

<213> *Neisseria meningitidis*

<400> 15

atgaatatga aaaaatggat tgccgcccgc cttgcctgtt ccgcgctcgc gctgtctgcc	60
tgccgcggtc agggcaaaga tgccgcccgc cccgccgcaa accccgacaa agtgtaccgc	120
gtggcttcca acgccgagtt tgcccccttt gaattcttag actcgaaagg caatgttgaa	180

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yycttcgatg tggatttgat gaacgcgatg gcgaaggcgg gcaattttaa aatcgaattc 240
aacaccagc cgtgggacag ccttttcccc gccttgaaca acggcgatgc ggacgttggtg 300
atgtcgggcg taaccattac cgacgaccgc aaacagtcta tggacttcag cgaccogtat 360
tttgaaatca cccaagtcgt cctcgttccg aaaggcaaaa aaatatcttc ttccgaagat 420
ttgaaaaaca tgaacaaagt cggcgtggtg accggctaca cgggcgattt ctccgtatcc 480
aaactcttg gcaacgacaa cccgaaaatc gcgcgctttg aaaacgttcc cctgattatc 540
aaagaactgg aaaacggcgg cttggattcc gtggtcagcg acagcgcagt catcgccaat 600
tatgtgaaaa acaatccgac caaagggatg gacttcgtta ccctgcccga cttcaccacc 660
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<211> 268

<212> PRT

<213> *Neisseria meningitidis*

<400> 16

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35          40          45
Pro Phe Glu Ser Leu Asp Ser Lys Gly Asn Val Glu Gly Phe Asp Val
50          55          60
Asp Leu Met Asn Ala Met Ala Lys Ala Gly Asn Phe Lys Ile Glu Phe
65          70          75          80
Lys His Gln Pro Trp Asp Ser Leu Phe Pro Ala Leu Asn Asn Gly Asp
85          90          95
Ala Asp Val Val Met Ser Gly Val Thr Ile Thr Asp Asp Arg Lys Gln
100         105         110
Ser Met Asp Phe Ser Asp Pro Tyr Phe Glu Ile Thr Gln Val Val Leu
115         120         125
Val Pro Lys Gly Lys Lys Ile Ser Ser Ser Glu Asp Leu Lys Asn Met
130         135         140
Asn Lys Val Gly Val Val Thr Gly Tyr Thr Gly Asp Phe Ser Val Ser
145         150         155         160
Lys Leu Leu Gly Asn Asp Asn Pro Lys Ile Ala Arg Phe Glu Asn Val
165         170         175
Pro Leu Ile Ile Lys Glu Leu Glu Asn Gly Gly Leu Asp Ser Val Val
180         185         190
Ser Asp Ser Ala Val Ile Ala Asn Tyr Val Lys Asn Asn Pro Thr Lys
195         200         205
Gly Met Asp Phe Val Thr Leu Pro Asp Phe Thr Thr Glu His Tyr Gly
210         215         220
Ile Ala Val Arg Lys Gly Asp Glu Ala Thr Val Lys Met Leu Asn Asp

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WO 00/42191

PCT/EP00/00135

225	230	235	240												
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		245							250						255
Lys	Tyr	Phe	Ala	Lys	Glu	Asp	Gly	Gln	Ala	Ala	Lys				
		260							265						